

Day : Friday
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**PALM INTRANET**

Continuity Information for 10/628734

Parent Data

10628734

is a continuation in part of 09447966

Child Data

PCT/US03/35460 is a continuation of 10628734

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Inventor Information for 10/628734

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 **PALM INTRANET****Application Number Information**Application Number: 09/000533 Order This File AssignmentsExaminer Number: 75009 / WILSON, MICHAEL

Filing or 371(c) Date: 12/30/1997

Group Art Unit: 1632

Effective Date: 12/30/1997

Class/Subclass: 514/044.000

Application Received: 12/30/1997

Lost Case: NO

Pat. Num./Pub. Num: /20020001574

Interference Number:

Issue Date: 00/00/0000

Unmatched Petition: NO

Date of Abandonment: 10/10/2001

L&R Code: Secrecy Code:1

Attorney Docket Number:

Third Level Review: NO

Secrecy Order: NO

Status: 161 /ABANDONED -- FAILURE TO RESPOND TO AN
OFFICE ACTION

Status Date: 04/08/2002

Confirmation Number: 5446

Oral Hearing: NO

Title of Invention: **PROCESS OF DELIVERING A POLYNUCLEOTIDE TO A MUSCLE CELL
VIA THE VASCULAR SYSTEM**

Bar Code	PALM Location	Location Date	Charge to Loc	Charge to Name	Employee Name	Location
09000533	9200	10/03/2005	No Charge to Location	No Charge to Name	RAHMAN,MOHAMMAD	

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**PALM INTRANET****Application Number Information**

Application Number: 09/707117

Assignments

Filing or 371(c) Date: 11/06/2000

Effective Date: 11/06/2000

Application Received: 11/07/2000

Patent Number:

Issue Date: 00/00/0000

Date of Abandonment: 00/00/0000

Attorney Docket Number: Mirus.018.02

Status: 41 /NON FINAL ACTION MAILED

Confirmation Number: 8189

Title of Invention: INTRAVASCULAR DELIVERY OF NUCLEIC ACID

Examiner Number: 75009 / WILSON, MICHAEL

Group Art Unit: 1632

IFW IMAGE

Class/Subclass:

514/044.000

Lost Case: NO

Waiting for Response
Desc.

Interference Number:

Mail Misc Comm.

Unmatched Petition: NO

L&R Code: Secrecy Code:1

Third Level Review: NO

Secrecy Order: NO

Status Date: 03/16/2006

Oral Hearing: NO

Bar Code	PALM Location	Location Date	Charge to Loc	Charge to Name	Employee Name	Location
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1: Mol Ther. 2002 Nov;6(5):576-83.

Related Articles, Links

ELSEVIER
FULL-TEXT ARTICLE**Transcutaneous ultrasound augments naked DNA transfection of skeletal muscle.****Schratzberger P, Krainin JG, Schratzberger G, Silver M, Ma H, Kearney M, Zuk RF, Briskin AF, Losordo DW, Isner JM.**

Department of Cardiovascular Research, St. Elizabeth's Medical Center, Tufts University School of Medicine, Boston, Massachusetts 02135, USA.

This study was designed to test the hypothesis that transcutaneous ultrasound (US) exposure may augment the transfection efficiency and biological outcome associated with nonviral DNA gene transfer. Hindlimb muscles of New Zealand White rabbits were transfected with the reporter plasmid pCMV-beta, with or without US exposure. Optimization studies employed US exposure at various frequencies, mechanical indices, duty cycles, durations of exposure, and exposure time points. Based on these results, we explored the effect of US exposure on nonviral gene transfer of vascular endothelial growth factor (VEGF, phVEGF165) to promote neovascularization of ischemic hindlimbs. Ultrasound at 1 MHz, 100 W/cm (2), 6% duty cycle, and 5 minutes exposure time, applied immediately following DNA injection, was found to be the most effective among the settings tested, increasing beta-galactosidase expression approximately 20 fold. Compared with US exposure alone, or phVEGF165 only, phVEGF165 + US exposure yielded a statistically significant improvement in revascularization, as determined by calf blood pressure ratio, angiographic score, intravascular Doppler blood flow, and capillary/myocyte ratio. These data demonstrate that ultrasound, when applied directly after intramuscular gene transfer, significantly increases transfection efficiency in vivo. The biological significance of this finding was confirmed by augmented limb perfusion in response to US exposure and naked VEGF DNA.

PMID: 12409255 [PubMed - indexed for MEDLINE]

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L1	2	"6627616".pn.	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2006/04/14 08:12
L2	1	"6627616".pn. and VEGF	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2006/04/14 08:14
L3	2434	muscle and vascularization and vegf	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2006/04/14 08:15
L4	2439	muscle and vascularization and (vegf or veg)	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2006/04/14 08:15
L5	16	(muscle and vascularization and (vegf or veg)).clm.	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2006/04/14 08:17
L6	111	(muscle SAME (revascularization or vascularization)) same (vegf or veg)	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2006/04/14 08:17

EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	0	"6627616".pn. and angiogenic	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2006/04/14 08:25
L2	0	"6627616".pn. and vascularization	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2006/04/14 08:25
L3	0	"6627616".pn. and (revascularization or re-vascularization)	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2006/04/14 08:26
L4	0	"6627616".pn. and (vessel with formation)	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2006/04/14 08:26
L5	0	"6627616".pn. and (flow with improving)	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2006/04/14 08:26
L6	0	"6627616".pn. and (flow with (increase or increases))	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2006/04/14 08:27

(34) In another preferred embodiment, the permeability of the blood vessel can also be increased by a biologically-active molecule. A biologically-active molecule is a protein or a simple chemical such as papaverine or histamine that increases the permeability of the vessel by causing a change in function, activity, or shape of cells within the vessel wall such as the endothelial or smooth muscle cells. Typically, biologically-active molecules interact with a specific receptor or enzyme or protein within the vascular cell to change the vessel's permeability. Biologically-active molecules include vascular permeability factor (VPF) which is also known as vascular endothelial growth factor (VEGF). Another type of biologically-active molecule can also increase permeability by changing the extracellular connective material. For example, an enzyme could digest the extracellular material and increase the number and size of the holes of the connective material.